

KUDEV, A. P.

U S S R

Application of siloxanes as antifoaming additives to
indulating oils. Yu. G. Mamedaliev, A. M. Kulin, and
L. S. Mustafae. "Zh. Russ. Chem. U.S.S.R." 26, 777-81
(1952; Eng. translation). - See C.A. 47, 11711e

H. L. H.

KULIEV, A.M.

Scud

② Fuel

Fuel Abstracts
Vol. 15 No. 3
Mar. 1954
Natural Liquid Fuels and
Lubricants: Sources,
Properties, and Treatments

2171. USE OF SILOXANES AS ANTI-VAPOR ADDITIVES FOR LUBRICATING OILS.
Mamedaliev, Yu. G., Kuliev, A.M. and Mustafayev, I.B. (Zh. prikl. Khim.,
(J. appl. Chem., U.S.S.R.), Aug. 1953, vol. 26, p. 454-459). 0.5 to 1% of
synthetic siloxane oils were added to standard Soviet lubricants, which were
tested for foaming at 20 and 100°C by drawing air through them. Additives
obtained by hydrolysis of ethylchlorosilanes gave the best results.

② Fuel

F

KULINEV, A. M.

"Dependence of Residual Water Saturation on the Principal Physical Properties
of a Collector and on the Physicochemical Properties of Petroleum and Water."
Cand Tech Sci, Inst of Petroleum, Acad Sci Azerbaijhan SSR, Baku, 1954. (KL, No
3, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher
Educational Institutions (12)
SO: Sum. No. 556, 24 Jun 55

KULIVRY, Ali Musa, professor, doktor khimicheskikh nauk; GUTYRYA, V.S.,
professor, redaktor; GONCHAROV, I.A., tekhnicheskiy redaktor

[Ways of improving the qualities of petroleum lubricants] Puti
uluchsheniia kachestva neftianykh smazochnykh masel. Baku, Aznefte-
izdat, 1954. 92 p. [Microfilm]
(Lubrication and lubricants) (MIRA 9:12)

KULIYEV, A. M.

124-57-1-779

Translation from Referativnyy zhurnal, Mekhanika, 1957, Nr 1, p 103 (USSR)

AUTHORS: Kulihev, A. M., Babalyan, G. A.

TITLE: On the Study of Oil-flood Water Displacement (K izucheniyu protsessov vytessneniya vody neft'yu)

PERIODICAL: Tr. Nest. ekspeditsii AN AzSSR, 1955, Vol 2, pp 91-96

ABSTRACT: The results of experimental investigation on the displacement of water with kerosene are adduced for sand-reservoir models of different length, permeability, and inclination with respect to the horizon. The pressure gradients were of such magnitude that any additional increase therein did not reduce the residual water saturation any further. The authors reached the conclusion that in such conditions the gravitational effect does not influence the residual water saturation. Relationships are obtained between the residual water saturation, the length of the model, and its permeability. The authors propose to introduce correction factors into the experimental data obtained on short models, in order that these relationships may be used in the extrapolation to full-scale conditions.

V. L. Danilov

Card 1/1

1. Dams--Model test results 2. Reactions--Applications

The effect of polar compounds in petroleum and petroleum products on the displacement of water in oil-bearing sands. G. A. Balalyan and A. M. Kaliyev. Izvest. Akad. Nauk Azerbaidzhan. S.S.R. 1956, No. 3, 11-23. — The effects of the phys.-chem. properties of petroleum and water on the residual water content in the collector stratum have been detd., especially in connection with oil migration in the sands of the Middle Apskeron peninsula. Results indicate that these properties exert a powerful influence and that they cannot be ignored. Initial work consisted of a detn of the contact angle, surface tension, and interfacial tension of various hydrocarbon liquids (kerosene, transformer oil, solar oil, petrolatum, straight toluene and mixts. with varying amts. of stearic acid and oils contg. polar compds.) in contact with water (distd. water, synthetic and natural alk. solns., and sea water). The interfacial tension of a soln. of stearic acid in toluene in contact with alk. water decreased from 20 to 2 when the concn. of the acid was raised from 0 to 0.55%. Results of the investigation of the displacement of water by nonpolar hydrocarbon liquids (toluene contg. stearic acid and petroleum products of varying degrees of purity) show clearly that residual water satn. must be defined on the basis of the surface activity of the oils and of the type of water underlying the oil strata and that it is largely a function of those factors.

H. L. Olin

"APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000927510002-5

KULIYEV, A.M.; ORUDZHEVA, I.M.; ZAYNALOVA, G.A.; LEVSHINA, A.M.

Multipurpose AzNII-8 additive for truck and tractor oils. Azerb.
neft.khoz. 35 no.7:32-33 Jl '56. (MLRA 9:12)
(Lubrication and lubricants)

APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000927510002-5"

KULIYEV, A.M.; ZEYNALOVA, G.A.; ORUDZHEVA, I.M.; LEVSHINA, A.M.

Improving output factors of diesel engines operating on sulfurous
fuels. Azerb.neft.khoz.35 no.12:44-46 D '56. (MLRA 10:3)
(Diesel engine) (Diesel fuels)

KULIYEV, A.M.; BABALYAN, G.A., redaktor; MIKELADZE, G.A., redaktor izdatel'stva
AGAYEVA, Sh., tekhnicheskiy redaktor

[Connate water saturation of oil field collectors] K voprosu
ostatochnoi vodonasushchennosti kollektorov neftianykh mestorozhde-
ni. Baku, Izd-vo Akad. nauk Azerbaidzhanskoi SSR, 1957. 52 p.
(Water, Underground) (MLRA 10:8)

KULIYEV, A.M.; KULIYEV, R.Sh.; DREYZIN, M.M.; ANTONOVA, K.I.

Improvement of industrial naphthenic acids. Azerb.neft.khoz.36 no.2:31-
34 F '57. (MIRA 10:4)
(Naphthenic acid)

~~MAMEDALIYEV, Yu.G.; KULIYEV, A.M.~~

~~MAMEDALIYEV, Yu.G.; KULIYEV, A.M.~~

Present status petrochemistry in Azerbaijan and prospects for its development. Azerb.neft.khoz. 36 no.11:30-33 N '57. (MIRA 11:2)
(Azerbaijan--Petroleum products)

MAMEDALIYEV, Yu.G.; KULIYEV, A.M.; SULTANOV, Yu.M.

Catalytic dehydration of isopentane obtained from casing-head
gasoline [in Azerbaijani with summary in Russian]. Azerb. neft.
khoz. 36 no.12:27-29 D '57. (MIRA 11:3)
(Butane) (Dehydration (Chemistry))

KULIYEV, A.M.

Composition and Properties of the High Molecular (Cont.) 647
Weight Fraction of Petroleum; Collection of Papers, Moscow, Izd-vo AN SSSR, 1958, 370pp.
PART III. EFFECT OF COMPOSITION ON THE PERFORMANCE OF LUBRICATING OILS

Kuliyev, A.M., Kuliyev, R.Sh., Aliyev, M.I. Effect of the Hydrocarbon Composition 119
on the Physicochemical Properties and Performance of Lubricating Oils 119

A study was made of the narrow oil fractions and commercial oils obtained from various Baku crudes. It was shown that the physicochemical properties and the performance properties of oils are modified by the hydrocarbons composition and structure. The naphthene-paraffin hydrocarbons obtained from various crudes are similar in quality and have very good temperature-viscosity properties but show low oxidation stability. Aromatic hydrocarbons differ in their properties and have a greater effect on the quality of lubricating oils than naphthene-paraffin hydrocarbons. Aromatics and tars inhibit the action of depressants and additives. The article contains 16 tables there are no references.

Kreyn, S.E., Borovaya, M.S. Effect of the Chemical Composition of Petroleum 138
Lubricating Oils on Their Properties

This paper is a study of petroleum oils obtained from various Baku crudes. Components were separated by adsorption. The distillates

Cana 9/22

✓ 2nd Collection of papers publ. by AU Conf. Jan 56, Moscow.

KULIYEV, Ali Musa oglu, prof.; KULIYEV, Basul Shirin oglu; ALIYEV, Mamed Ibragim oglu; GUTYRYA, V.S., prof., doktor khim.nauk, red.; SHTSYNGEL', A.S., red.izd-va

[Production technology and investigation of lubricating oils from Baku petroleum] Tekhnologiya polucheniia i issledovaniye masel iz Bakinskikh neftei. Baku, Azerbaijanskoe gos.izd-vo neft. i nauchno-tekhn.lit-ry, 1958. 644 p. (MIRA 12:9)
(Baku--Petroleum) (Lubrication and lubricants)

KULIYEV, A.M.; KULIYEV, R.Sh.; DREYZINA, M.M.; ANTONOVA, K.I.;
KITUSHINA, Ye.N.; CHIKAREVA, N.I.; ALIYEV, M.I.

Investigating Neftyanyye Kamni crude with regard to its suitability
for producing distillate lubricating oils. Sbor. trud. AkNII NP
no.2:106-130 Ag '58. (MIRA 12:6)
(Neftyanyye Kamni region--Petroleum--Analysis)
(Lubrication and lubricants)

KULIYEV, A.M.; KULIYEV, R.Sh.; DREYZINA, M.M.; ANTONOVA, K.I.; KITUSHINA,
Ye.N; CHIKAREVA, N.I.; ALIYEV, M.I.

Producing residual oils from Neftyanyye Kamni crude. Sbor. trud.
AzNII NP no.2:131-144 Ag '58. (MIRA 12:6)
(Neftyanyye Kamni region--Petroleum)
(Petroleum--Refining)

KULIYEV, A.M.; KULIYEV, R.Sh.; DREYZINA, M.M.; MARGOLINA, R.L.;
MUSAYEV, M.R.

Use of the deasphaltizing process in the production of MK-22
aviation oil. Sbor. trud. AzNII MP no.2:144-155 Ag '58.
(MIRA 12:6)

(Petroleum products)
(Lubrication and Lubricants)

KULIYEV, A.M.; ORUDZHEVA, I.M.; MIRDZHAVADOVA, M.M.; LOGINOV, S.N.
MUSAYEV, M.R.

Producing lubricating oils from paraffin-base crudes by de-
waxing with carbamide. Sbor. trud. AkNII NP no.2:156-172: Ag '58.
(MIRA 12:6)

(Lubrication and lubricants)
(Paraffins) (Urea)

SOV/81-59-8-28972

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 8, p.505 (USSR)

AUTHORS: Kuliyev, A.M., Aliyev, M.I., Kuliyev, R.Sh.

TITLE: The Response of Oils of Various Hydrocarbon Composition to Additives

PERIODICAL: Sb. tr. Azerb. n.-i. in-t neftepererabat. prom-sti, 1958, Nr 2,
pp 192 - 206 (Azerbaijani; Russian summary)

ABSTRACT: The response of distillates and finished AS-9.5 oils, as well as individual groups of hydrocarbons separated from them to the following antioxidant additives has been investigated: α -naphthol (I), para-oxydiphenylamine (II) and to the depressant (D) of AzNII which lowers the pour point. It has been established that finished AS-9.5 oils show a better response to I, II and D than the corresponding distillates of autol-10 from Balakhany and Binagada petroleum and petroleum of the layer "Neftyanye Kamni". Methane-naphthene hydrocarbons separated from the oils investigated have shown a good respectivity to I, II and D and the aromatic hydrocarbons and asphalt-resinous substances were unreceptive to them.

N. Kel'tsev

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KULIYEV, A.M.; ORUDZHEVA, I.M.; ZEYNALOVA, G.A.; AKHAMED-ZADE, D.A.;
ATAMYAN, A.A.; LEVSHINA, A.M.; SADYKHOV, K.I.

Studies in the synthesis and use of additives for lubricating
oils. Sbor. trud. AzNII NP no.2:207-224 Ag '58.
(MIRA 12:6)
(Lubrication and lubricants—Additives)

KULIYEV, A.M.; LEVSHINA, A.M.; ALIYEV, M.I.

Investigating the synthesis of depressants and studying their effect on different oils and on hydrocarbon groups derived from them. Sbor. trud. AzNII NP no.2:225-243 Ag '58.

(MIRA 12:6)

(Lubrication and lubricants--Additives)
(Hydrocarbons)

KULIYEV, A.M.; AKHMED-ZADE, D.A.; SADYKHOV, K.I.

Study of detergent additives to automobile lubricants and their
synthesis from salts of sulfonic acids. Sbor. trud. Akad. Nauk. no. 2:
244-255 Ag '58. (NIRA 12:6)

(Lubrication and lubricants--Additives)
(Sulfonic acids)

67632

SOV/81-59-14-51087

15.6200

Translation from: Referativnyy zhurnal, Khimiya, 1959, Nr 14, p 457 (USSR)

AUTHORS: Kuliyev, A.M., Kuliyev, R.Sh., Dreyzina, M.M., Mekhtiyev, M.Z., Guseynov,
F.I., Chikareva, N.I., Sanamova, R.A., Kevorkova, I.S.TITLE: The Effect of the Conditions of Acidic Purification on the Filterability
of Contacted Oil in the Preparation of Aircraft Oil MK-22 //PERIODICAL: Sb. tr. Azerb. n.-i. in-t po pererabotke nefti, 1958, Nr 3, pp 181 - 193
(Azerbaijani summary)ABSTRACT: The effect of the temperature of acidic purification and settling, the
duration of storing of the acidic oil, the concentration of H_2SO_4 and the
method of its preparation, the consumption of acid and the addition of
coagulator on the filterability of contacted oil has been studied. The
contacting of a concentrate of Surakhany choice petroleum with $VU_{100} =$
 $= 4.27^{\circ}C$, the coking capacity 2.58, was carried out in a laboratory
contacting device with a charge of 750 g oil and 24% (based on the acidic
oil) gumbrine at a final contacting temperature of $350^{\circ}C$. The filtering
was carried out on a Büchner's funnel at $170 - 180^{\circ}C$ in a vacuum of
50 - 60 mm Hg; the time for the filtration of 500 ml filter discharge was

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SOV/81-59-14-51087

The Effect of the Conditions of Acidic Purification on the Filterability of Contacted Oil in the Preparation of Aircraft Oil MK-22

taken as filterability index. It has been shown that the filterability of the contacted oil can deteriorate in the case of an oleum content in the used acid, a rise of the temperature above 70°C, and long storing of the acidic oil (2 days); the coagulator was a commercial contact agent and 43% H₂SO₄; although it permitted one to improve the filterability by 2-3 times, in the periods of bad filterability of the oil it does not restore the normal conditions of filtration. There are five references.

G. Margolina

4

Card 2/2

MAMEDALIYEV, Yu.G.; KULIYEV, A.M.; AKHUNDOV, M.A.; MUSTAFAYEV, L.S.; ALI-ZADE,
A.D.

Effect of surface active substances from petroleum on the growth and
developments of baby chicks. Uch.zap.AGU no.5:39-46 '58.
(MIHA 12:1)

(Poultry--Feeding and feeding stuffs)
(Surface active agents)

MAMEDALIYEV, Yu.G.; KULIYEV, A.M.; AKHUNDOV, M.A.; MUSTAFAYEV, L.S.;
ALIZADE, A.G.

Effect of oil-base surface active substances on the growth and
development of chickens. Izv. vys. ucheb. zav.; neft' i gaz
no. 6:91-95 '58. (MIRA 11:9)

1. Azerbaydzhansklyy gosudarstvennyy universitet im. S.M. Kirova.
(Poultry) (Surface active agents)

"APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000927510002-5

KULIYEV, A.M.; ABDINOVA, A.B.

Synthesis of tertiary alkyl derivatives of urea. Uch.zap.AGU no.5:
47-53 ' 58. (MIRA 12:1)
(Urea derivatives) (Alkylation)

APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000927510002-5"

14/5

SOV/92-58-9-13/36

AUTHORS: Kuliyev, A.M., Kuliyev, R.Sh., Dreyzina, M.M., and Aliyev, M.I., Members of the AzNII NI

TITLE: The Present Technology of Lube Oil Production Must be Revised (Prinyatyyu tekhnologiyu proizvodstva masel neobkhodimo izmenit')

PERIODICAL: Neftyanik, 1958, Nr 9, pp 16 - 18 (USSR)

ABSTRACT: The authors state that selective solvents, among which phenol and furfural are the most frequently employed, are used at present in the production of lubricating oil. Thirty-three percent of various lube oils are produced in USA by using phenol and approximately the same percentage by using furfural. The drawback of phenol as a solvent is that its high crystallization temperature does not allow one to carry out the process at a low temperature. To lower the crystallization temperature of phenol, water has to be added. As a result, a considerable amount of heat must be consumed to vaporize the

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SOV/92-58-9-13/36

quantity of water added. Safety precautions also make the use of phenol undesirable. On the other hand, furfural is an unstable solvent which, during storage, is subject to oxidation and resinification. Nevertheless, operations carried out at the Baku refinery, and the study of the problem by AzNII NP have proved that the refining with furfural is simple and has a number of advantages which the author illustrates in Table 1. This table shows that almost the same properties of refine are obtained by using the equal quantity of phenol or furfural, but that the yield of lubricating oil is higher when furfural is used. However, not in all cases is the use of furfural desirable. For instance, the production of diesel oil from crudes of the Neftyanyye Kamni field revealed that the use of phenol produces better results. It follows, therefore, that the choice of a selective solvent should be based on results of testing, which depend on properties of crude oil used and of the product which has to be obtained. Studies of the AzNII NP have proved, however, that the furfural refining of lube oil fractions from crudes of Zhirnovo, Izbaskent, Nebitdag and Baku produces better results than refining with phenol. The second important problem in lube

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SOV/92-58-9-13/59

oil production is the treatment of refinates. Refineries now under construction are designed to carry out the contact treatment of refinates by using the bleaching clay. However, the use of bleaching clay as contact media does not ensure the yield of a finished product with sufficient stability and desirable color. Studies of AzNII NP have proved that tarry matters can be easily removed from refinates by a small quantity of sulfuric acid before contact treatment is started. Figures of Table 2 confirm this statement of the author recommending the use of sulfuric acid before the bleaching clay contact treatment. There are 2 tables.

ASSOCIATION: AzNII NP (Azerbaijan State Scientific Research Institute NP)

Card 3/3

KULIYEV, A.M.

Method for removing paraffin by means of carbamide used in the
petroleum industry. Azerb. neft. khoz. 37 no. 1:31-34 Ja '58.
(Paraffins) (Urea) (MIRA 11:6)

KULIYEV, A.M.

Installation for studying the effect of various factors
governing the residual water saturation of porous media under
high pressures and temperatures. Azerb. neft. khoz. 37 no.7:
25-27 Jl '58. (MIRA 11:9)
(oil field brines)

KUIIYEV, A. M., SANIN, P. I., SHER, V. V.

"Synthetic Additives for Lubricating Oils, Influence of Additive
Structure of Their Activity."

Report submitted at the Fifth World Petroleum Congress, 30 May -
5 June 1959. New York.

15.6600
11.9700

26198
S/981/61/000/012/026/028
B103/B202

AUTHORS: Kuliyev, A. M., Orudzheva, I. M., Zeynalova, G. A., Atal'yan, A. A., Akhmed-Zade, D. A., Levshina, A. M., Sadykhov, K. I., Abdinova, A. B.

TITLE: Synthesis of organic compounds containing various functional groups and their applications to improve the quality of lubricating oils

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 12, 1961, 530, abstract 12M225. (Tr. 1-y Konferentsii zakavkazsk. un-tov. Baku, Azerb. un-t, 1959, 111-123)

TEXT: The authors present the results of research work which has been conducted for many years in the Azerbaydzhanskaya SSR concerning the synthesis and the choice of additives to lubricating oils. The following compounds were synthesized and their properties were studied: mono-, di-, and trialkyl derivatives of benzene, naphthalene, tetraline, anthracene, and phenanthrene; alkyl benzene-, alkyl naphthalene-, alkyl phenol-, and alkyl tetraline sulfonates of Ca, Ba, Sr, Pb, and Cu; mono- and dialkyl phenols; mono- and

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26198
S/081/61/000/012/026/028
B103/B202

X

Synthesis of organic compounds ...

disulfides of alkyl phenols and their Ba and Ca salts; tri-(alkylphenol)-phosphites and their mono- and disulfide derivatives; mono- and dialkyl ureas; condensation products of urea with aldehydes and alkyl phenols. The depressor АЗНИИ (Aznii) (dialkyl naphthalene, in which alkyls originate from chlorinated paraffin) from the year 1947, detergents for motor oils Aznii-4 from the year 1949 and Aznii-5 (both sulfonates) were industrially used. The multifunctional additives to the motor oils Aznii-7 and Aznii-8 (both salts of the alkyl phenol sulfides) and an additive stabilizing the mineral oil obtained by condensation of urea with aldehyde and alkyl phenol, were recommended for introduction into industry. [Abstracter's note: Complete translation.]

Card 2/2

ABASOV, M.T.; DZHALILOV, K.N.; KULIYEV, A.M.

One distance problem of the seepage of an elastic liquid in an
elastic layer [in Azerbaijani with summary in Russian]. Izv. AN
Azerb. SSR. Ser. fiz.-tekhn. i khim. nauk no.1:73-78 '59.
(MIRA 12:6)

(Petroleum geology)

KULIYEV, A.M.; ZEYNALOVA, G.A.; ARDINOVA, A.B.

Synthesis of the products of condensation of carbamide and
alkyl phenols with formaldehyde and study of their stabilizing
action on lubricating oils. Azerb.khim.zhur. no.2:29-38
'59. (MIRA 13:6)
(Urea) (Phenol condensation products) (Formaldehyde)
(Lubrication and lubricants)

KULIYEV, A.M.

Expulsion of one liquid by another from reservoir rock of non-homogeneous permeability. Izv. AN Azerb. SSR. Ser. fiz.-mat. i tekhn. nauk. no.3:57-66 '59
(MIRA 13:3)
(Oil sands--Permeability)

"APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000927510002-5

KULIYEV, A.M.; ARDINOVA, A.B.; ZEYNALOVA, G.A.; ORUDZHEVA, I.M.

Effect of urea derivatives on the oxidation resistance of
lubricating oils. Azerb. khim. zhur. no.4:15-20 '59. (MIRA 14:9)
(Lubrication and lubricants)
(Urea)

APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000927510002-5"

KULIYEV, A.M.; KULIYEV, R.Sh.; DREYZINA, M.M.; KERVORKOVA, I.S.; ALIYEV, M.I.;
SOLEYMANOVA, F.G.; EL'OVICH, I.I.; NESTERENKO, M.Ye.

Methods for improving the quality of oil for carburetor engines.
Sbor.trud.Az NII NP no.4:89-113 '59. (MIRA 15:5)
(Carburetors) (Lubrication and lubricants)

KULIYEV, A.M.; ZEYNALOVA, G.A.; ORUDZHEVA, I.M.

Condensation of alkylphenols with aldehydes and ammonia.
Azerb. khim. zhur. no.4:93-100 '59. (MIRA 14:9)
(inenol condensation products)
(/ Aldehydes) (Ammonia)

KULIYEV, A.M.; ZEYNALOVA, G.A.; SADYKHOV, K.I.

Synthesis of additives increasing the stability of lubricants.
Sbor. trud. Az NII NP no.4:173-182 '59. (MIRA 15:5)
(Lubrication and lubricants—Additives)

KULIYEV, A.M.; AKHMED-ZADE, D.A.

Preparation of combination additives from sulfonated petrolatum.
Sbor. trud. Az NII NP no. 4:183-190 '59. (MIRA 15:5)
(Petrolatum) (Lubrication and lubricants--Additives)

S/081/61/000/003/013/019
A166/A129

11.0100

AUTHORS: Kuliyev, A. M., Marlanov, M. A., Alekperov, G. Z.

TITLE: A new apparatus for determining the thermal stability of motor fuels

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 3, 1961, 480, abstract 3M282.
(Azerb. kimja zh., Azerb. khim. zh., 1959, no. 6, 27 - 32)

TEXT: The authors recommend a laboratory apparatus which operates under dynamic conditions to determine the thermal stability of fuel during heating of the test sample at 175°C for 30 minutes. The apparatus (a schematic diagram is given) consists of an electrically heated cylindrical body containing a disk rotating at 25 rpm and seated on a shaft connected to an electric motor. Four LCA (LSA) flasks filled with test samples are fitted to the disk; by the end of the test the oxygen in the flasks is practically completely consumed.

Summary by S. Rozenfel'd

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[Abstracter's note: Complete translation]

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"APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000927510002-5

ABASOV, M.T.; DZHALILOV, K.N.; KULIYEV, A.M.

Distribution of pressure in a heterogeneous gas layer. Azerb. neft.
khoz. 38 no.9:21-24 S '59. (MIRA 13:2)
(Gas, Natural)

APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000927510002-5"

KULIYEV, A.M.; MARDANOV, M.A.; ALIEKPEROV, G.Z.

Thermal stability of motor fuels. Azerb. neft. khoz. 36 no.9:34-37
S '59. (MIRA 13:2)

(Motor fuels)

ABASOV, Mitat Teymur oglu; DZHALILOV, Kurban Nizameddin oglu; AZIZOVA, F.M.; ALIYEV, Z.S.; BABANLY, V.Yu.; GULAMOV, Kh.A.; IBRAGIMOV, M.R.; KAZIMOV, A.Sh.; KULIYEV, A.M.; SEMENOVA, I.I.; ROZENBERG, M.D., prof., doktor tekhn. nauk, red.; AL'TMAN, T.B., red. izd-va

[Problems of underground hydrodynamics and development of oil and gas fields] Voprosy podzemnoi gidrodinamiki i razrabotki neftianykh i gazovykh mestorozhdenii. Baku, Azerbaizhanskoe gos. izd-vo neft. i nauchno-tekhn. lit-ry, 1960. 254 p. (MIRA 14:11)

1. Neftyanaya ekspeditsiya AN Azerbaydzhana (for Azizova, Aliyev, Babanly, Gulamov, Ibragimov, Kazimov, Kuliyev, Semenova).
(Oil reservoir engineering)

PHASE I BOOK EXPLOITATION SOV/5710

Kuliyev, Ali Musa, Academician, Academy of Sciences Azerbaydzhhan SSR.

Prisadki k smazochnym maslam (Lubricant Additives) Baku, Azerneftneshr,
1960. 321 p. Errata slip inserted. 1000 copies printed.

Ed.: I. A. Orudzheva, Candidate of Technical Sciences; Ed. of Publishing
House: A. S. Shteyngel'.

PURPOSE: This book is intended for personnel of scientific research institutes
and petroleum refineries and for students at schools of higher education.

COVERAGE: The book contains the results of research by personnel of the labo-
ratoriya sinteza maslyanykh prisadok INKhP AN Azerbaydzhanskoy SSR (Labo-
ratory for Synthesis of Lubricant Additives of the Institute for Petroleum and
Chemical Production, Academy of Sciences Azerbaydzhhan SSR). The studies

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SOV/5710

Lubricant Additives

were undertaken with a view toward synthesizing fuel additives to improve the quality of lubricants produced from the highly sulfurous petroleum of the eastern regions of the Soviet Union. The synthesis of additives, their designations, structures, and industrial applications are discussed. The author thanks I. M. Orudzheva, G. A. Zeynalova, K. I. Sadykhov, A. A. Atal'yan, A. M. Levshin, D. A. Akhmed-zade, A. B. Abdinov, R. L. Margolin, U. Ya. Kafarov, and M. A. Mamodov, all Senior Scientific Workers of the Institute. There are 204 references: 167 Soviet, 30 English, 1 Dutch, 1 French, and 5 German.

TABLE OF CONTENTS [Abridged]:

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Introduction

Ch. I. Requirements of Lubricants and the Use of Additives Which Improve the Quality of Lubricants

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KULIYEV, A.M.; ORUDZHEVA, I.M.; LOGINOVА, S.N.

Production of tractor lubricating oils from Bibi Eybat paraffinic
crudes by dewaxing with the aid of carbamide. Azerb.khim.zhur.
no.1:3-7 '60. (MIRA 14:9)
(Petroleum--Refining) (Paraffin wax) (Lubrication and lubricants)

15 6600
AUTHORS:
TITLE:
PERIODICAL:

Kuliyev, A. M., Orudzheva, I. M.
Results of studies in the field of synthesis and application of admixtures to lubricating oils
Referativnyy zhurnal. Khimiya, no. 7, 1961, 474, abstract
TM235 (7M235) ("Azerb. khim. zh.", 1960, no. 2, 23 - 33)
TEXT: The authors compile the results of studies carried out at the Laboratoriya sinteza prisadok k smazochnymi maslami Instituta neftekhimicheskikh protsessov AN Azerbaydzhanskoy SSR (Laboratory for the chemical Processes of Admixtures to Lubricating Oils of the Institute for the synthesis and introduction into the commercial production of admixtures improving the quality of tractor- and Diesel oil, furthermore, of admixtures improving the lubricating effect of oils for bevel gears and antioxidants admixtures for power machinery oils. Besides, a number of theoretical

Card 1/2

res
tract-

KULIYEV, A.M.; ZUL'FUGAROVA, A.G.

Synthesis of aliphatic alkyl-m-dioxanes. Azerb.khim.zhur. no.3:19-
23 '60. (MIRA 14:8)
(Dioxane)

S/081/62/000/003/072/090
B171/B102

AUTHOR: Kulihev, A. M.

TITLE: Synthesis, study and application of additives to lubricating oils. Results of investigations by the AzNII NP

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 3, 1962, 493, abstract 3M225 (Tr. 3-y Vses. konferentsii po treniyu i iznosu v mashinakh v. 3, M., AN SSSR, 1960, 566-373)

TEXT: Short reports are given of results of investigations of depressants, multifunctional and combined additives and other-ones. Are also given the directions of further investigations of viscous additives and additives with high ash content for motor oils. See also RZhKhim., 1961, 12M225.
[Abstracter's note: Complete translation.]

Card 1/1

ABASOV, M. T., KULIYEV, A. M.

Displacement of gas by gassified petroleum. Gas.prom. 5 no.4:4-6
Ap '60. (MIRA 13:8)
(Condensate oil wells) (Gas wells)

KULIYEV, A.M.; SADYKHOV, K.I.; MAMEDOV, M.A.

Synthesis and study of the SB-3 (barium sulfonate-3), a new
sulfonate additive to motortruck oils. Azerb.khim.zhur. no.6:
77-82 '60. (MIRA 14:8)
(Lubrication and lubricants—Additives) (Diesel fuels)

DALIN, M.A.; KULIYEV, A.M.; NURIYEVA, Z.D.

The Azerbaijan chemical industry during the last 40 years. Azerb.
neft. khoz. 39:26-27 Ap '60. (MIRA 13:11)
(Azerbaijan---Petroleum chemicals)

ABASOV, M.T.; KULIYEV, A.M.

Some hydrodynamic calculations in exploiting gas and oil fields.
Azerb. neft. khoz. 39 no.3(405)•22-24 Mr '60* (MIRA 14:9)
(Oil field brines).

11.9700
S/081/62/000/003/043/057
B156/B101

AUTHORS: Kuliyev, A. M., Sadykhov, K. I., Mamedov, M. A.

TITLE: Synthesis, investigation and uses of sulfonate additives for lubricating oils

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 8, 1962, 483-484,
abstract 8M210 (Sb. "Prisadki k maslам i toplivam". M.,
Gostoptekhizdat, 1961, 40-58)

TEXT: Several salts of alkyl aromatic hydrocarbo-sulfo acids were synthesized and the effectiveness of their action on oils studied in relation to molecular weight, structure and the nature of the metal included in their composition. As well as Ca- and Ba-salts, Co-, Pb-, Sr-, and Cu-sulfonates of sulfonated benzene were produced and investigated. It is proved that the greater the number of carbon atoms in the alkyl side chain of the sulfonates, the better their cleansing properties. It is shown that increase in their molecular weight improves the depressant properties of the synthesized sulfonates. The results of laboratory experiments made on oils with sulfonate additives and on oils with sulfonate and anti-oxidizing

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Synthesis, investigation and ...

S/081/62/000/008/043/057
B156/B101

additives are given. [Abstracter's note: Complete translation.]

Card 2/2

36933
S/081/62/000/007/025/033
B168/B101

119700

AUTHORS:

Kuliyev, A. M., Zeynalova, G. A., Abdinova, A. B.

TITLE:

Synthesis and examination of anti-oxidant additives for machine and other oils

PERIODICAL:

Referativnyy zhurnal. Khimiya, no. 7, 1962, 548, abstract
7M183 (Sb. "Prisadki k maslам i toplivam". M.,
Gostoptekhizdat, 1961, 102-109)

TEXT: Using the VTI method, the authors investigated the oxidation resistance of mineral oils (transformer oil MK-6 (MK-6) and MK-8 (MK-8)) containing the following synthetic additives: condensation products (1) of 1 mole urea, of 2 moles CH₂O and of 1 mole p-alkylphenol (alkyls: n-C₃H₇, tert-C₄H₉, tert-C₅H₁₁, sec-C₄H₉, sec-C₆H₁₃, sec-C₈H₁₇, tert-C₈H₁₇, C₉H₁₉, n-C₁₆H₃₃) of the olefins from the 100-180°C fraction of thermal cracking), condensation products (2) of furfuramide with different alkylphenols and condensation products of acetaldehyde ammonia with various alkylphenols. The first condensation product, obtained from the 100-180°C fraction of Card 1/2

Synthesis and examination of ...

S/081/62/000/007/025/033
B168/B101

thermal cracking (additive азни-11 (aznii-11)) proved an effective anti-oxidant (at a concentration of 0.1%); at a test temperature of 120°C this product was equal in effectiveness to ionol and p-hydroxydiphenylamine and at 150 and 170°C was superior to ionol. The second condensation product, obtained from industrial acrylphenol (additive азни-11f (aznii-11f)), was also found to be an effective anti-oxidant; it was more effective than ionol (at test temperatures of 120 and 150°C). [Abstracter's note:
Complete translation.]

X

Card 2/2

11.970

15548
S/081/62/000/006/082/117
B167/B101AUTHORS: Kulihev, A. M., Atal'yan, A. A.

TITLE: Synthesis and investigation of additives which increase the wetting properties of oils

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 6, 1962, 539, abstract 6M251 (Sb. "Prisadki k maslам i toplivam". M., Gostoptekhizdat, 1961, 121-124)

TEXT: The ultra-high pressure additive Aznii-9 was prepared by chlorinating the naphthalene filter cake of a pyrolysis product, purified from unsaturated hydrocarbons by H_2SO_4 , or the 160-300°C fraction of light-oil pyrolysis, also purified by H_2SO_4 . Chlorination was carried out up to a chlorine content of 15-20% in the product, which was then sulphurized with elementary S to the extent of 1-1.5%. Modified additives of the type of Aznii-9 were prepared by chlorinating naphtha from catalytic cracking (b. p. 160-270°C) and adding Aznii-7 or some other corrosion inhibitor. Results of tests (4-sphere friction machine) on various mineral oils

Card 1/2

S/081/62/000/006/082/117
B167/B101

Synthesis and investigation of ...

containing 3% of Aznii-9 or its variants are reported. In operating trials of aviation oil MK-22 (MK-22) containing Aznii-9 in the decelerator systems of trolleybuses, the wear on the gear teeth was reduced by one-half in the presence of the additive. [Abstracter's note: Complete translation.]

X

Card 2/2

ABASOV, M.T.; KULIYEV, A.M.

Hydrodynamic calculations to assist in the exploitation of
petroleum-gas deposits. Izv. AN Azerb. SSR. Ser. fiz.-mat.
i tekhn. nauk no.1:149-159 '61. (MIRA 14:4)
(Petroleum engineering)
(Hydrodynamics)

11-9700

REF ID:
S/081/62/000/006/087/117
B167/B101

AUTHORS: Kulihev, A. M., Levshina, A. M.

TITLE: Study of the effect of additives containing different functional groups on oil fractions and oils

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 6, 1962, 541, abstract 6M261 (Sb. "Prisadki k maslам i toplivam". M., Gostoptekhizdat, 1961, 159-168)

TEXT: A study of the effect of various Aznii-7 and Aznii-6 additives, prepared from alkyl phenols with alkyl groups of different lengths (C_7 , C_{11} , C_{13} , and C_{16}), on the corrosiveness (according to Pinkevich) and the stability to oxidation (according to Aznii) of mineral oils (AK-10 (AK-10) and Diesel oil from Buzovny naphtha). All the additives studied had a marked effect on corrosiveness, but gave a worse oxidation stability, the latter effect increasing with the length of the alkyl group. As regards solubility, additives containing C_{11} - C_{12} alkyls are recommended. Also studied was the effect of (1%) additions to mineral oil of $(C_6H_5)_2S$ and $(C_6H_5)_2Se$, of some of their hydroxy and/or alkyl

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S/081/62/000/006/087/117
B167/B101

Study of the effect of additives ...

derivatives, and of $(CH_3)_3C_6H_4O)_3PS$ and $(CH_3)_3C_6H_4O)_3PSe$, on the thermal stability (according to Papok) of the oil and on the above properties. The Se compounds were found to improve the oil more effectively than the S analogs: The only exception was the corrosiveness of the thio- and the selenophosphate. The depressor properties of several mono-, di-, and trialkyl benzenes, naphthalenes, tetralins, and other aromatic compounds with various alkyl substituents (C_7 , C_{16} , and C_{24}) were measured on the oil AK-15 (AK-15): The most effective was the dialkyl naphthalene with a C_{24} alkyl group (Aznii depressor). Differences in the susceptibility of various oils and fractions to the action of the Aznii depressant, antioxidant additives (phenyl- α -naphthylamine, p-hydroxydiphenylamine, α -naphthol, 2,6-di-tert-butyl-4-methyl phenol, and Santolyub-394), and of the Aznii-7 additive were demonstrated on oils from different sources and on their fractions (naphtho-paraffinic, aromatic hydrocarbon, and tar fractions). [Abstracter's note: Complete translation.]

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34892

S/081/62/000/003/073/090
B171/B102

11.9700

AUTHORS: Kuliyev, A. M., Sadykhov, Z. A., Levshina, A. M.TITLE: Low-temperature copolymerization of isobutylene with styrene
in the presence of aluminum chloridePERIODICAL: Referativnyy zhurnal. Khimiya, no. 3, 1962, 493, abstract
3M226 (Azerb. khim. zh. no. 3, 1961, 17-24)

TEXT: The low-temperature copolymerization of isobutylene (I) with styrene (II) in isoctane and in the presence of AlCl_3 has been investigated in order to obtain viscosity improvers that would be stable under the working conditions to which the oils with additives are subjected in engines. The reaction was carried out in a glass reactor, using a mixer, at a temperature of -105°C . The ratios of (I) and (II) were varied from 95:5 to 85:15 for reaction durations from 2 min to 3 hours. 0.1 to 1.5% of the catalyst were used. Under the above conditions, copolymers with molecular weights of about 6200 to 13,000 were obtained. It has been shown that an addition of 3% of various samples of synthetic polymers increases the viscosity index of the MK-8 (MK-8) oil from 56 to 130-145, and its

✓
Card 1/2

S/081/62/000/003/073/090
B171/B102

Low-temperature copolymerization ...

viscosity at 100°C from 2.78 to 4.2-5.2 centistokes. The AC -10 (AS-10)-type oils with a viscosity index of about 78-82 can be obtained by bodying up the AC -6 (AS-6) oil with 1.5% of the copolymer. [Abstracter's note: Complete translation.]

✓

Card 2/2

119700
S/081/62/000/007/023/033
B168/B101

AUTHORS: Mamedova, R. K., Kuliyev, A. M., Sadykhov, K. I.

TITLE: Synthesis of organic compounds containing phosphorus and sulfur and an investigation into their influence on the properties of lubricating oils

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 7, 1962, 548, abstract 7M181 (Azerb. khim. zh., no. 4, 1961, 9-13)

TEXT: Zinc salts of compounds containing phosphorus and sulfur (2-8% P and 6-9% S) with an ash content of 16-28% were synthesized from unsaturated hydrocarbons contained in narrow fractions of the products of thermal cracking of paraffin. When the resultant additives were added in the proportion of 1% to a selectively refined diesel oil the corrosion caused by the oil decreased sharply whilst the stability of the oil improved. The synthesized salts can be used as components for the production of compound additives. [Abstracter's note: Complete translation.] ✓B

Card 1/1

"APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000927510002-5

ABASOV, M.T.; DZHALILOV, K.N.; KULIYEV, A.M.; ROZENBERG, M.D.

Displacing gas with hinned crude. Nauch.-tekhn.sbor. po
dob. nefti. no. 14:35-3° '61. (MIRA 17:6)

APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000927510002-5"

KULIYEV, A.M.

Calculating the flow of petroleum containing dissolved gas
in porous media. Dokl. AN Azerb. SSR 17 no.10:865-869 '61.
(MIRA 14:12)

1. Institut razrabotki neftyanykh i gazonovykh mestorozhdeniy
AN AzSSR. Predstavлено академиком AN AzSSR Z.I. Khalilovym.
(Oil reservoir engineering)

ABASOV, M.T.; KULIYEV, A.M.

Some results of calculating the exploitation of gas and oil
fields. Azerb. neft. khoz. 40 no.1:25-27 Ja '61.
(MIRA 34:8)
(Oil fields—Production methods)

ABASOV, M.T.; BLANK, G.I.; KULIYEV, A.M.; CHERNOMORDIKOV, M.Z.

Principles of the development plan for seven horizons of the
Karadag gas-condensate oil field. Trudy Inst. razrab. neft. i
gaz. mestorozh. AN Azerb. SSR 1:62-88 '62. (MIRA 16:6)

(Karadag region--Condensate oil wells)

42952

S/081/62/000/022/058/088
B180/B186*11.9700*
AUTHORS: Kuliyev, A. N., Mamedov, F. N., Musayeva, N. F., Aliyeva, R.G.

TITLE: Condensation of alkyl phenols with formaldehyde and diethyl amine

PERIODICAL: Referativnyy zhurnal.. Khimiya, no. 22, 1962, 427, abstract
22M92 (Azerb. khim. zh., no. 1, 1962, 93-97 [summary in
Azerb.])TEXT: By condensing alkyl phenols, particularly n-tert-butyl-, n-tert-amyl-,
n-tert-octyl phenols, with formaldehyde and diethanol amine using the
Mannich reaction, compounds with high stabilizing properties were produced,
so that they can be used as anti-oxidant additives for lubricating oils.
The experiments resulted in the production and characterization of the
following compounds: 2-diethyl-amino methyl-4-tert-butyl-, 2-diethyl-
amino methyl-4-tert-amyl- and 2-diethyl-amino methyl-4-tert-octyl phenols.
These compounds were tested in a mixture with diesel oil D-11 (D-11) by
solvent refining using the AzNII method, with the aim of studying their
anti-oxidant properties. Additions of 0.05-0.5 % were made to the oil.

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Condensation of alkyl phenols with...

S/081/62/000/022/058/088
B180/B186

The best effect was achieved with an additive concentration of 0.2 %.
10 references. [Abstracter's note: Complete translation.]

Card 2/2

ABASOV, M.T.; KULIYEV, A.M.

Working of gas and oil fields until depletion. Izv.AN Azerb.SSR.
Ser.fiz.-mat.i tekhn.nauk no.1:131-145 '62. (MIRA 15:4)
(Gas, Natural) (Petroleum engineering)

S/081/62/000/023/036/120
B166/B101

AUTHORS: Kuliyev, A. M., Kuliyeva, Kh. N.

TITLE: Condensation of thiourea and alkylphenols with formaldehyde

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 23, 1962, 268-269,
abstract 23Zh166 (Azerb. khim. zh., no. 2, 1962, 65-69
[summary in Azerb.])

TEXT: By condensing together thiourea (I) and C_6H_4OHR (IIa - g, where (a)
 $R = C_3H_7$, (b) $R = C_4H_9$, (c) $R = C_5H_{11}$, (d) $R = C_6H_{13}$, (e) $R = C_7H_{15}$,
(f) $R = C_8H_{17}$, (g) $R = C_{10}H_{21}$) with formaldehyde (III) substances with the
general formula $CS(NHCH_2C_6H_5OHR)_2$ (IVa - g) were synthesized and their
anti-corrosion and anti-oxidation properties studied. The aforesaid II were
produced by alkylating phenol with the appropriate alcohols in the presence
of concentrated H_2SO_4 . The addition of an alkylphenol group to the
dimethylolthiourea radical was not detected, but apparently (see Ellis,

Card 1/2

S/081/62/000/023/036/120
B166/B101

Condensation of thiourea and...

Khimiya sinteticheskikh smol (Chemistry of Synthetic Resins), v. 1, no. 2, chapter 26, 1938) took place in the para or ortho position. A mixture of I, II and a great excess of a 37% aqueous solution of III was heated to 60-65°C for 30-45 min stirring all the time, concentrated HCl was added as a catalyst (temperature rose to 96-98°C), the mixture was then agitated for 4-5 hrs at 96-98°C, C₆H₆ was extracted, then IV were separated from the benzene layer (the IV and its molecular weight are given): a, -; b, 402.3; c, 429.6; d, 455.5; e, -; f, 507.8; g, 573.8. IVa - f are crystalline substances, IVg is a viscous fluid. [Abstracter's note: Complete translation.] ✓

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S/137/62/000/012/059/085
A006/A101

AUTHORS: Kuliyev, A. M., Negreyev, V. F., Mamedov, I. A., Atal'yan, A. A., Gasanova, S. G., Mamedov, F. N., Abdullayeva, G. M.

TITLE: Condensation products of alkylphenols and their derivatives with monochloro-acetic acid as inhibitors of steel corrosion

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 12, 1962, 115 - 116, abstract 121717 ("Azerb. khim. zh.", 1962, no. 3, 59 - 66; Azerb. summary)

TEXT: The authors investigated the effect of the admixture of alkylphenol condensation products with monochloro-acetic acid upon the corrosion rate of steel in a system of two immiscible liquids; the system is composed of aqueous solutions of salts and hydrocarbons. The investigation shows that these compounds are inhibitors of steel corrosion, which retard the corrosion rate by approximately 90 - 95% at a concentration of the admixtures to the carbons as high as 50 mg/l. These compounds are recommended for natural tests in oil wells, where intensive corrosion of the underground equipment is observed, and for other analogous cases. There are 6 references. [Abstracter's note: Complete translation] The authors' summary

Card 1/1.

KULIYEV, A.M.

Developing oil and gas fields by maintaining reservoir
pressure. Izv. AN Azerb. SSR Ser. geol.-geog. nauk i nefti
no. 5:19-25 '62. (MIRA 16:6)

(Oil field flooding)

KULIYEV, A.M.; MAMEDOV, F.N.; MUSAYEVA, N.P.

Condensation of alkyl phenol sulfides with formaldehyde and
diethylamine. Azerb.khim.zhur. no.5:63-70 '62. (MIRA 16:5)
(Phenol condensation products) (Formaldehyde) (Diethylamine)

BR

S/081/63/000/003/021/036
B144/B186

AUTHORS: Kuliyev, A. M., Orudzheva, I. M., Mamedova, P. S.

TITLE: Study of the effect of AzNII-10 (AzNII-10) additive on the stability and frictional characteristics of oils

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 3, 1963, 514, abstract 3P241 (Azerb. neft. kh-vo, no. 7, 1962, 38-39)

TEXT: The study dealt with MK-8 (MK-8), MC-20 (MS-20) and MK-22 (MK-22) aviation oils, transformator, diesel, and also synthetic oils. The stability of oils was determined by the VTI and AzNII method. Testing of oils containing additives in the four-ball machine showed that on addition of 0.5% AzNII-10 additive (the condensation product of sulfide alkyl phenol with the chloroanhydride of alkyl phenol phosphorous acid) the frictional characteristics of the oils improve markedly. The additive raises the stability of transformator, diesel and synthetic oils; it has a positive effect on the stability of transformator oil under oxidation conditions at a temperature of $\geq 120^{\circ}\text{C}$. When the additive AzNII-10 is added to an oil containing the additives AzNII-7 and SB-3 (SB-3), the

Card 1/2

Study of the effect of ...

S/081/63/000/003/021/036
B144/B186

stability of this oil is favorably affected. Synthetic oils containing AZNII-10 have good anticorrosive and antiscalping properties. The authors conclude that the additive AZNII-10 is capable of increasing the stability and the anticorrosive, antiscalping and frictional characteristics of oils. [Abstracter's note: Complete translation.]

Card 2/2

KULIYEV, A.M., akademik

Synthesis of organic compounds as lubricant additives. Vest.AN
SSSR 32 no.7:51-53 Jl '62. (MIRA 15:7)

1. Akademiya nauk Azerbaydzhanskoy SSR.
(Lubrication and lubricants)

ABASOV, M.T.; KULIYEV, A.M.; ASLANOV, R.T.

Comparing average saturation with edge saturation in saturated
oil flow. Azerb.neft.khoz. 41 no.2:23-25 F '62. (MIRA 15:8)
(Oil reservoir engineering)

KULIYEV, A.M.

High-grade oils are the basis for progress in engine manufacturing.
Azerb.neft.khoz. 4l no.2:35-37 F '62. (MIRA 15:8)
(Lubrication and lubricants)

KULIYEV, A.M.; SADYKHOV, Z.A.; LEVSHINA, A.M.

Polymerization of isobutylene and copolymerization of isobutylene
and styrene in the presence of a metallo-organic catalyst. Azerb.
neft.khoz. 41 no.3:33-36 Mr '62. (MIRA 15:8)
(Propene) (Polymerization)

KULIYEV, A.M.

Comparing middle and edge oil saturation in the flow of the
thinned oil in nonuniform layers. Azerb. neft. khoz.
41 no.11:20-23 N '62. (MIRA 16:2)
(Oil reservoir engineering)

CHERNOZHUKOV, N.I., doktor tekhn. nauk, prof., nauchnyy red.;
ZHERDEVA, L.G., red.; IVANOVA, L.V., red.; ISAGULYANTS, V.I.,
red.; ISMAILOV, R.G., red.; KREYN, S.E., red.; KULIYEV, A.M.,
red.; MAMEDOV, M.A., red.; PAPOK, K.K., red.; SPEKTOR, Sh.Sh.,
red.; FEDOTOVA, A.F., red.; SHKHIYAN, S.Kh., red.; LEVINA,
Ye.S., ved. red.; POLOSINA, A.S., tekhn. red.

[Improvement of the quality and the production of lubricating
oils] Uluchshenie kachestva i sovershenstvovanie proizvodstva
smazochnykh masel; trudy. Moskva, Gostoptekhizdat, 1963. 255 p.
(MIRA 16:6)

1. Vsesoyuznoye soveshchaniye po uluchsheniyu kachestva bakin-
skikh smazochnykh masel i usovershenstvovaniyu tekhnologii ikh
proizvodstva, Baku, 1961.

(Lubrication and lubricants)

ACCESSION NR: AT4001187

S/3030/63/000/000/0116/0137

AUTHORS: Kuliyev, A. M.; Orudzheva, I. M.; Zeynalova, G. A.;
Sadykhov, K. I.

TITLE: Synthesis and use of new additives for motor and power
plant oils

SOURCE: Uluchsheniye kachestva i sovershenstvovaniye proizvodstva
smazochnykh masel. Trudy Vses. soveshchaniya, Moscow,
1963, 116-137

TOPIC TAGS: motor oil, lubricant, antioxidant, additive, SB-3,
BFK-1, phosphorus containing additive, sulfonic acid.
alkylarene, alkaline earth salt, sulfonic additive,
sulfonic acid, bisphenols, alkylphenols, formaldehyde,
polyfunctional additive, aznii-11, MK-6, MK-11, fur-
fureamide, diphenylamine, 4-hydroxy-, acetaldehyde,
ammonia, phenol-p-tert-octyl-, 1-naphthylamine, N-
phenyl-, carbamide

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ACCESSION NR: AT4001187

ABSTRACT: The results of synthesis and testing of new and perspective oil additives developed in the INKhP are summarized. A series of alkylaromatic sulfonates ($C_1 - C_{16}$; benzenes, naphthalene, tetralin, phenol and chlorophenyl) were synthesized and characterized; the relationship between their detergative properties and their solubility, molecular weight, metal content, side chain length, aromatic nucleus and presence of functional groups was studied. The stability, detergent and corrosive properties of some of these compounds--SB-3, PMS-19, NG-102 were laboratory tested; SB-3 gave better results in wear and deposit formation after long term testing than AZNII-8 or TsiATIM-339. A study of Ba, Ca, and Zn salts of alkylphenol-formaldehyde condensation products indicated the Ba salt; BFK-1, to have the best detergent, anti-corrosion and antideposit properties, its effectiveness approaching that of monofunctional phosphorus-containing additives. For antioxidants, a new series of compounds was synthesized based on alkylated ureas. AZNII-11, a condensate of alkylphenol with urea and formaldehyde is especially interesting. Condensates of alkylphenols (p-tert.-butyl, -amyl, -octyl) with aldehydes (furfuralde-

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hyde, acetaldehyde) and ammonia yielded an especially promising AZNII-lif (substituted alkyiphenoxy-furfuramide). About 1% of this gives smaller amounts of deposite, lower acid number of the oil and better stabilization than ionol. Urotropine-formamide condensates were investigated. Optimum synthesis conditions for additive No. 17, p-tert. octylphenol-urotropine-formaldehyde condensate were studied. 0.1% of No. 17 in MK-8 oil gave as much antioxidant protection as ionol, and was more effective than p-hydroxydiphenylamine, as tested by the VTI method at 140° and 200°C. Polyfunctional additives were prepared from mixtures of alkyl phenolates, phenylsulfonates and phenolate-P₂S₅ reaction products. Mixtures of SB-3 and VNII NP-354, VNII NP-353, Zn salt of S- and P-containing compounds, or BFK-1, tested on transport engines YaAz-204 and KDM-46, showed the SB-3 + BFK-1 combination most effective. SB-3 + AZNII-7 (1:1) offered better protection in a S-containing AS-10 oil than either component alone. Orig. art. has: 16 Tables and 5 Equations.

ASSOCIATION: None

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KULIYEV, A.M.; ALIZADE, Z.A.

Alkylation of bisphenol with alkyl halides in the presence
of aluminum trichloride. Azerb. khim. zhur. no.2:25-30 '63.
(MIRA 16:8)

KULIYEV , A.M.; KULIYEVA, Kh.N.

Derivatives of thiourea as additives to lubricating oils. Azerb.khim.
zhur. no.4:19-20 '63.
(MIRA 17:2)

KULIYEV, A.M.; ZEYNALOV, K.A.

Effect of the degree of refining of a viscous distillate of oil
component from Peschanyy island crudes on the heat conductivity
coefficient. Azerb.khim.zhur. no.6:3-9 '63. (MIRA 17:3)

NEGREYEV, V.F.; KULIYEV, A.M.; MAMEDOV, I.A.; SADYKHOV, K.I.; ZEYNALOV, S.D.;
ABDULLAYEVA, G.M.; ZEYNALOVA, K.A.

Investigating some surface-active by-products of the industry of
oil additives as corrosion inhibitors. Azerb.khim,zhur. no.6:
57-64 '63. (MIRA 17:3)

HALL, R. A.; ALEXANDROV, G.E.; PESKOV, A.V.; CHIKHACH, A.U.; BOGDANOV, T.P.

1966, October 20. Soviet scientists have been authorized to carry out laboratory
set-up. Gez. (Soviet Academy of Sciences) (1966-10-20)

L 12401-63

RP/EJ/MW/MH

EWP(j)/EPF(c)/EWT(m)/EDS AFFTC/ASD/APGC Pg-4/Pr-4

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AUTHOR: Kuliyev, A. M.; Zeynalova, G. A.; Abdinova, A. B.; Kafarova, U. Ya.; Sileymanova, F. G.; Mamedov, M. A.77
75TITLE: Preparation of multifunctional additive based on condensation products of alkylphenol with formaldehydeSOURCE: Khimiya i tekhnologiya topliv i masei, no. 6, 1963, 24-28

TOPIC TAGS: Fuel additives, physicochemical properties, formaldehyde, alkylphenol

ABSTRACT: The investigation of a multifunctional additive by the condensation reaction of formaldehyde with alkylphenol and its comparison to other existing additives has been completed. In the process of investigation it was established that the use of highly effective multifunctional additives in fuels is more economical and since all the functional groups are concentrated into one molecule, the elimination of these additives is rapid as a result of its chemical interaction with the metals at contact or adsorption to the metal surface. The composition of the synthesized barium salt of the condensation alkylphenol and formaldehyde products (BFK) with other combination additives showed that the BFK additive is more superior to other additives. It prevents corrosion of the

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diesel fuels containing as much as 1.2% of sulfur in their composition and to a large extent improves its wetting ability. An industrial production of HFK based on the original data has been proposed. Orig. art. has: 5 tables.

ASSOCIATION: INKhP AN AzSSR

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BUGIRZADE, T.M.; KULIYEV, A.M.; KULIYEV, R.Sh.; SAMEDOVA, F.I.

Production of insulating oils of high stability. Azerb. neft.
khoz. 42 no.1:30-32 Ja '63. (MIRA 16:10)

(Insulating oils)